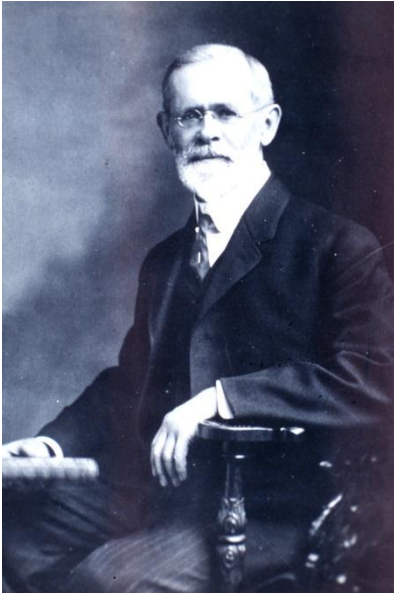


The Father of Weather Forecasting in America: Cleveland Abbe



Cleveland Abbe was a driving force behind the establishment of weather services and forecasting in the United States, particularly with respect to defining the federal government's role in meteorological public service. Professor Abbe was one of a select group of scientists and political leaders who brought meteorology and forecasting into the modern age during the middle and late 19th century.

When the Smithsonian Institution was founded in 1846, its first secretary was a professor of mathematics from New York named Joseph Henry. Henry had always been interested in meteorology, having spent several years collecting weather observations from around the state of New York and conducting research on lightning. Over the course of the 1850s he amassed several hundred volunteer weather observers in the U.S. and nearby territories. His primary aim was to track storms across North America, using observations in the West to predict weather that would subsequently impact the cities in the east.

Meanwhile, another professor from New York, Cleveland Abbe, had been studying astronomy while also enjoying meteorology as a hobby. After teaching engineering at the University of Michigan, Abbe was hired by the Cincinnati Astronomical Society in 1868. Realizing the importance of weather to astronomical studies of the sky, Abbe immersed himself in meteorology and spent the rest of his life advancing the cause of weather observing and prediction.

In 1869 Abbe set up his own network of weather observers by training Army observer sergeants and civilian volunteers to use meteorological instruments and then send their reports to Washington via telegraph. Abbe was able to convince Western Union to allow the messages to be sent free of charge, and a code was developed to keep the amount of transcribed text in the observations to a minimum.

On September 1, 1869 Abbe wrote his first 24-hour weather forecast. In a letter to his father he stated, "I have started that which the country will not willingly let die."

Using his own weather observers plus Joseph Henry's extensive Smithsonian network, Abbe was able to demonstrate the great value of systematic weather observations and the resultant forecasts they made possible. Abbe and several of his supporters took their case to Congress and were able to get a bill introduced that would create a weather observing and forecasting body run by the federal government. The bill was signed into law on February 9, 1870 by President Grant, establishing what we know today as the National Weather Service.

Abbe was an early leader in the new service and worked tirelessly to improve the nation's observing network and forecasts. Cleveland Abbe made the U.S. the world's leader in meteorology through the development of weather instruments, rigorous quality control of observations, and refinement of the weather forecasting process.